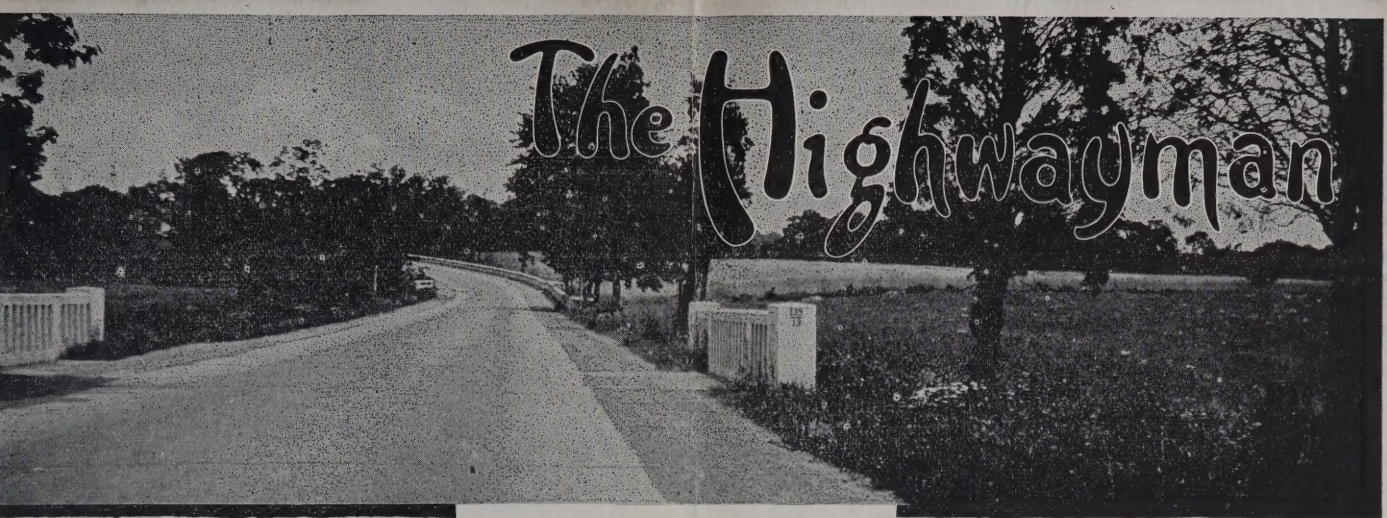


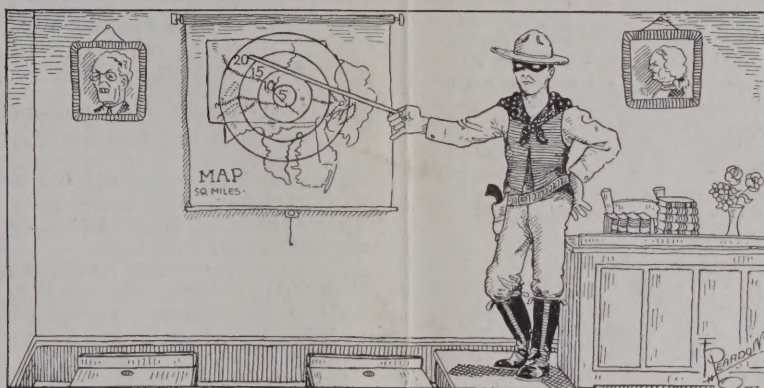
# The Highwayman



Route No. 13, North of Kingston

**The Highwayman Is Out  
For More and Better Roads  
in New Jersey**

July, 1922  
Vol. I  
No. 12



## “Your Efficiency Increases in Proportion to the Square of Your Radius”

*(A Little Lesson In Arithmetic Which It Will  
Pay You To Put In Your Pipe and Smoke)*

About the weakest, most helpless thing in the world is the human animal.

Stripped of those inventions which his fertile brain has mothered, left to fall back on his own naked resources, he would not be a match for a yellow dog in the street.

The secret of man's achievements is that he has learned to *multiply* the faculties with which Nature endowed him. The muscles of his arm, so puny compared to those of an elephant, applied to a compound lever or a chain of gears, exerts a force capable of rending the elephant limb from limb. His voice, picked up and reinforced by the ether waves, circles the continents of the globe. His thoughts, multiplied a million times by the magic of print, can overthrow kingdoms and revolutionize social systems. Thus, through the entire category of his faculties.

But the one thing which it has been most difficult to multiply is the use of—*time*.

How often you have heard, or used your-

self, the expression “If I could only be in two places at the same times!”

Of course, you can't do that. But the nearer you can come to doing it, the more you can achieve. Your efficiency increases in proportion to the ground you can cover. And the ground you can cover increases in proportion to the *square* of the distance you can travel: attending to your business, whatever that business may be. For example, the grocer, who, with trucks and good roads, can deliver to his trade within a radius of twenty miles, is capable of serving a territory *sixteen* times as large as he could serve with a horse and wagon, and a five mile radius.

The same applies equally to rich man, poor man, beggar man and thief, doctor, lawyer, merchant, chief.

All of which is only another way of proving that a good road is worth all its costs—and a lot more.

—Q. E. D.



# The Highwayman

## The Highwayman

Published Monthly By The  
State Highway Department, at Trenton, N. J.  
The HIGHWAYMAN will be sent free upon application  
to any citizen of New Jersey who is interested in  
"More and Better Roads For New Jersey!"

### THE HIGHWAYMAN

H. C. SHINN, *Editor in Chief*

#### Associate Editors

A. LEE GROVER R. B. GAGE  
C. F. BEDWELL EDWARD E. REED  
CHAS. FISHBERG

*Managing Editor*  
F. F. ROCKWELL

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Governor EDWARD I. EDWARDS, *Ex Officio*

Hon. GEO. L. BURTON, Chairman	- - -	South River
JOHN FERRIS	- - -	Jersey City
GEORGE PADDOCK	- - -	Newark
WALTER F. WHITTEMORE	- - -	Newton
THOMAS E. COLLINS	- - -	Elizabeth
ALBERT S. L. DOUGHTY	- - -	Mt. Holly
CHAS. F. SEABROOK	- - -	Bridgeton
CHAS. V. DUFFY	- - -	Paterson

#### State Highway Association

<i>President</i>	- - -	A. W. MUIR
<i>1st Vice President</i>	- - -	W. A. JOHNSON, <i>Laboratory</i>
<i>2nd Vice President</i>	- - -	J. L. VOGEL, <i>Bridge Division</i>
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<i>6th Vice President</i>	- - -	H. D. ROBBINS, <i>Construction</i>
<i>Executive Secretary</i>	- - -	EDWARD W. O'BRIEN

## Let Us Hear from You

164 Madison Ave., Elizabeth, N. J.

### THE HIGHWAYMAN:

Gentlemen:—I acknowledge with thanks the copy of the March Issue of THE HIGHWAYMAN. Have found it more than interesting, containing reports of the condition of our state roads. Although I do all my motoring on Saturday and Sunday, I travel over our own Jersey roads more than any other, and as a citizen of this state all my life, there are no roads that satisfy me more than New Jersey roads.

I am sure very few people realize what it means to keep the highways in good condition, when they are traveled so heavily by trucks.

May I ask that you kindly put my name on your regular mailing list and if I can be of any assistance to you, I am at your service.

A town whose roads are in bad condition hardly ever advances very much. To this I am sure you will agree.

Trusting you will accept this letter in good faith and with the spirit of a New Jersey booster, I am,

Respectfully,

EVERETT B. CRAIG,  
164 Madison Ave., Elizabeth, N. J.

Phone—Eliz. 1569-R.

Mr. Everett B. Craig,  
164 Madison Ave., Elizabeth, N. J.

April 21, 1922.

Dear Sir:—Your letter of recent date commenting on the manner in which the roads of New Jersey have been maintained acts somewhat like a tonic when one considers how easy it is to complain of the maintenance of the roads.

In order that we may encourage the men in the Department to keep up the standard they have already attained, I am arranging to have this communication appear in the HIGHWAYMAN, which will appear in the July Issue, providing I do not hear from you requesting me not to do so.

Assuring you of my appreciation of the thought you had when you wrote me your letter, I remain

Very truly yours,

T. J. WASSER, *State Highway Engineer.*

TJW/O'B.



Roy Mullins

He Helped Build the Grand Central Station  
in New York

Roy was born at Baldwinville, Massachusetts, October 9, 1884. Educated at Dartmouth College, B. S., 1907; Thayer School of Civil Engineering, a graduate of Dartmouth College, C. E., 1908.

Spent two years with Elliott C. Brown Company of New York City on construction work in Long Island, Connecticut and Massachusetts. One year on construction work with N. Y. C. & H. R. R. at Grand Central Terminal, New York City.

One year on construction work with Erie Railroad in Ohio. One full year and two summers as instructor in drawing, descriptive geometry and surveying in Dartmouth College and the Thayer School.

Entered N. J. State Highway Department April 3, 1913, as Right of Way Engineer. August 1, 1914, Division Engineer in the Southern Division. March 15, 1919, Division Engineer in the Northern Division. November 1, 1921, in Office of the Construction Engineer at Trenton.



### STATE OF NEW JERSEY DEPARTMENT OF WEIGHTS AND MEASURES TRENTON

May 18, 1922.

Mr. H. C. Shinn,  
Editor-in-Chief, "THE HIGHWAYMAN",  
State Highway Dept., Trenton, N. J.

My Dear Mr. Shinn:

Through the courtesy of your Department we have been receiving "THE HIGHWAYMAN"—it's a dandy! You fellows are certainly to be congratulated upon the splendid work you are doing.

I see quite a lot of favorable mention of the manner in which the roads were kept open during the past winter; the expressions of commendation are well merited. Good, open roads all the year through benefit not only the individual, but go a great ways toward expediting the work of various branches of our State government, ours among them. Winter has in the past meant a "slowing up" of many of our sixty weights and measures men throughout New Jersey, due to bad traveling conditions; when they can work, they are "on the go" all the time. The "resting up" period for them is getting to be a thing of the past; their reports now show they are able to keep going all through the winter season. Last year was our banner year for results—the biggest since the department was established back in 1911; the good roads contributed largely to this.

And not least among the other good things you have done is the fine co-operation given this Department which I assure you is deeply appreciated.

Yours very truly,

/s/ JOS. L. ROGERS, *Secretary.*





**Robert A. Meeker**  
Engineer in Charge of Surveys and Right of Way

Mr. Meeker is a graduate of Rutgers College and has the academic degree of B. Sc., M. Sc.; and C. E. He served one year with the New Jersey State Geological Survey. He then followed mining engineering for ten years in the South and Southwest and in Cuba.

Mr. Meeker was Engineer in Charge when Union County built the first system of roads under the County Bonding Act, entailing a total expenditure of \$400,000. He was Street Commissioner and City Engineer of Plainfield for seven years, after which he was engaged in private practice for two years. Mr. Meeker entered the employ of the New Jersey State Highway Department in July, 1900, the title of the office at that time being State Supervisor of Roads. (This was later changed to State Highway Engineer.) He served in this capacity until April, 1918. After private practice until October, 1920, Mr. Meeker was made Engineer in Charge of Surveys and Rights of Way, which position he now holds.

## Highwaymen Turn Firemen Jack Edwards to the Front

*Rightmire Home at Deans Saved From Flame.*

One of the hottest fires that has occurred on the Georges Road in years broke out yesterday morning at the Rightmire farm at Deans. The conflagration resulted in the destruction of seven outbuildings, one of which was the original Rightmire homestead. The spacious home of the family was saved from destruction.

Simultaneously with a fire alarm being sent to Cranbury for assistance, the employes of the State Highway Department under Alfred Kerr, who has charge of Route No. 1, south of New Brunswick, were called. Both departments responded promptly and were soon at work fighting the flames which were spreading rapidly. While the Cranbury Fire Department poured chemicals on the flames the highwaymen formed a bucket brigade and did effective work.

While the flames were eating their way toward the big home of the Rightmires, Supervisor John T. Edwards, of the highway department and a brother of Governor E. I. Edwards, reached the scene. He immediately took command of his men and urged them on in battling the flames. He was covered with mud and soot when he departed and was also drenched.

During the fire the home of Justice of the Peace Walters, of Deans was threatened several times.

It was reported that sparks from the saw-mill opposite the Rightmire and Walters homes were responsible.—*New Brunswick Daily Home News.*

To the Members of the  
State Highway Department.

April 17, 1922.

Permit me to thank you all, for Mr. Fishberg and myself, for your very sensible wedding gift.

I can assure you we both appreciate it very much.

Very cordially,

MRS. CHARLES FISHBERG.

## NEW JERSEY STATE HIGHWAY DEPARTMENT

March 1st, 1922

*Executive*

HON. EDWARD I. EDWARDS, Governor

*The State Highway Commission*

and

THOMAS J. WASSER, State Highway Engineer

### ADMINISTRATION

A. LEE GROVER, Secretary and Chief Clerk

M. L. HOWELL - - Chief Auditor and Accountant

CHAS. FISHBERG - - - - Assistant Chief Clerk

MISS GRACE WILLIAMSON - - - Chief File Clerk

R. W. WILDBLOOD - - - - Purchase Clerk

### CONSTRUCTION DIVISION

C. F. BEDWELL, Construction Engineer

G. R. MOORE, Ass't Construction Engineer

R. A. MEEKER - - - - Right of Way Engineer

C. A. MEAD - - - - Bridge Engineer

THOMAS GEORGE - - - Acting Supt. of State Labor

C. A. BURN - - - - Northern Division Engineer

H. D. ROBBINS - - - Central Division Engineer

J. A. WILLIAMS - - - Southern Division Engineer

### MAINTENANCE, EQUIPMENT AND PROJECTS DIVISION

EDWARD E. REED, Assistant State Highway Engineer

A. W. MUIR - - - Superintendent of Maintenance

JACOB HAGIN - Superintendent of Plant and Equipment

N. C. APPELEGATE - - - Supervisor of Equipment

A. D. BULLOCK - - - - Projects Engineer

H. C. SHINN - - - Engineer of Special Assignments

### TESTING LABORATORY

R. B. GAGE, Chemical Engineer

J. G. BRAGG - - - - Senior Testing Engineer

F. H. BAUMANN - - - Senior Testing Chemist

## Fatal Accident on Route 6

*Harry N. Becker Met Death In Trying To Save  
the Lives of Some Small Children*

Harry N. Becker, of Westville, New Jersey, Bridge Tender on the Big Timber Creek Bridge on Route No. 6 was killed recently while acting in the performance of his duties, in an attempt to halt a runaway team of horses which was endangering the lives of some small children in the vicinity of the bridge.

From the accounts of the accidents which we have received, it is understood that Becker warned the children who were endangered, and then made a valiant effort to bring the team to a stop. In doing so, however, he in some unknown manner fell and the wheels of the wagon passed over his body. He was immediately removed to his home and later to a hospital in Camden, where his injuries resulted in his death on the following day.

At the time of the accident, Becker was on the bridge in the performance of his duties, and in his effort to stop the team of horses, he most undoubtedly had in mind the protection and safeguarding of the traveling public and the small children whose lives were jeopardized by the runaway team.

Becker's beneficiaries will receive payment from the New Jersey State Pension Fund by reason of the fact that he had just recently joined. The initial payment has in fact already been made to his widow and she will continue to receive semi-monthly payments of half his salary for the rest of her life.

This is the first fatality since the pension system has been in operation and demonstrates the quick and practical relief to the beneficiary from this fund.

Miss Williamson admits that there is a great improvement in the filing work, the subjects are coming in better, but there is still room for great improvement.



# The Highwayman

ARE YOU ON WHEN YOU'RE OFF  
or

OFF WHEN YOU'RE ON?

When Ed. saved the bridge, he was  
"off duty".

There are three types of men:

Those who are on the job only when  
they are on duty;

Those who are only half on the job  
even when they are on duty;



E. B. LOUGHRAN

## Loughran Saves the Bridge

But—

Some Darn Fool Was Careless with a Match

One of our Detour Investigators, Ed. B. Loughran, saved the Amboy Bridge from a serious fire and possible bad tie up of the very heavy traveled State Highway (Shore) Route No. 4, when he discovered smoke coming from under the bridge Sunday, June 11, 1922. Ed immediately notified Bridge Engineer Stephen Bashoda and Traffic Officer Mashusky, who in turn sent in an alarm to the South Amboy Fire Department. Loughran also gave the alarm to a State Police Motorcycle policeman.

In a few minutes both the Perth Amboy and the South Amboy Fire Departments were on the scene and the fire

was soon extinguished. The old bridge would probably have been an easy prey to the flames but for the prompt action. A stiff wind was blowing at the time.

Loughran's action is particularly commendable because the bridge was no particular responsibility of his and he might have ignored the smoke as probably unimportant and continued his Sunday outing with his family.

This incident shows us that people using this and other timber structures cannot be too strongly warned against throwing lighted cigars, cigarettes or matches upon these structures.

And those who are "on" all the time,  
whether their time card is punched  
"in", or not.

It is those in the latter class who  
generally happen to be the "lucky"  
guys who eventually get "something  
better."

Maybe it's mere coincidence; prob-  
ably it isn't.

To which class do YOU belong?

## Governor Edwards Appoints Board of Engineers

Governor Edward I. Edwards, on March 17th, 1922, appointed a State Board of Professional Engineers and Land Surveyors, the personnel of which follows:

Thomas J. Wasser, State Highway Engineer, Trenton, N. J.

George H. Noble, Asst. City Engineer, Clifton, N. J.  
Harvey Snook, County Engineer, Sussex County, New-  
ton, N. J.

John C. Remington, Jr., Consulting Engineer, Haddon-  
field, N. J.

Hugh A. Kelly, Engineer and Architect, Dept. of Parks  
and Public Improvements, Jersey City, N. J.

The Act creating this Board was made possible through the efforts of the professional engineers in the State of New Jersey, the object being to safeguard the life, health and property of citizens.

Engineers and Land Surveyors in order to practice in the future, must submit to the Board satisfactory evidence that he or she is fully qualified to practice professional engineering or land surveying.

The need of regulation of engineering practice has always existed, as will be realized by the number of lives that daily depend upon the safe and proper design and construction and the immense amount of money involved in engineering projects. The public would have no assurance of the safety of bridges, buildings, dams, tunnels, railways and numerous other engineering works and investors would have no assurance of the economy of the design of such structures in which their funds are invested, without a law providing for licensing the engineers who are responsible for the design and construction of these public works.

The passage of this licensing act was sponsored by reputable professional engineers, in order to safeguard the public who as a general thing are inclined to accept every new bridge or other structure thrown open, as being safe without realizing the chances of fatal accidents occurring due to lack of regulation and provision for the fixing of responsibility upon men competent to design and supervise construction.

No one giving thought to the matter would engage a lawyer when not admitted to the bar, a dentist or physician, or an architect who had not been licensed. There is as much reason to examine and license professional engineers and land surveyors as any of the above mentioned professions. It is now necessary for everyone to be licensed to practice in the State of New Jersey who through technical knowledge gained by education and experience in one or more branches of engineering, initiates, investigates, plans and directs the application of the resources of nature to the use and convenience of man and who represents himself or herself to be such an engineer whether through the use of the term engineer with or without qualifying adjectives or through the use of some other title implying that he or she is such an engineer.

Land Surveying as covered by the Act, covers surveys for the determination of areas or for the establishment or re-establishment of land boundaries and the sub-division and platting of land, and it is necessary for all persons who conduct such surveys, to apply to the State Board of Engineers for a license.

Although only appointed the latter part of March, the State Board of Engineers has lost no time and is now ready to receive applications from those desiring to practice professional engineering and, or, land surveying in New Jersey.

A fee of \$25.00 must accompany an application for license to practice Professional Engineering and a fee of \$25.00 must accompany an application for a license to practice Land Surveying. For those who desire to practice both Professional Engineering and Land Surveying, the fee to accompany the application is \$35.00. There will be an additional nominal charge for filing the license with the Secretary of State and for the seal, etc.

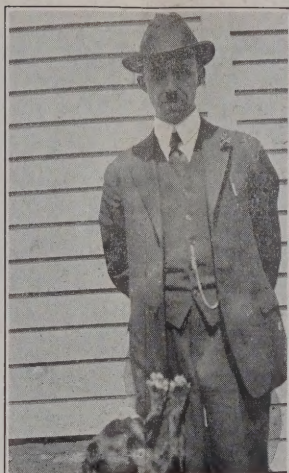
Requests for application blanks should be addressed to Hugh A. Kelly, Secretary, 710 Trust Co. of N. J. Building, Jersey City, N. J.

THOMAS J. WASSER, President.  
Trenton, N. J., April 17, 1922.



G. R. Moore is Assistant Construction Engineer.

He lives—or rather sleeps—at Manasquan. When this photo was taken, the dog was putting up a strong argument to G. R., attempting to persuade him that he should stay home nights instead of burning up New Jersey roads, working overtime for the Highway Department.



Mr. Moore took a vacation last month—the first in many years. If you happen to run across G. R., please don't mention the fact that you saw his picture in the HIGHWAYMAN, as the photo was supplied, without his knowledge, by Mrs. M., and we wouldn't like to be responsible for starting anything.

G. R. MOORE  
Assistant Construction Engineer

## State Highway Engineer Given Testimonial Dinner

A testimonial dinner was given to Mr. T. J. Wasser on July 1st, in honor of the second anniversary of his appointment as State Highway Engineer and at the Dedication of the new State garage known as the Fernwood Service Station.

Dinner was served in the new garage, after which musical selections were rendered and talks given by members of the Commission, guests, and Mr. Wasser himself.

We are giving Mr. Wasser's speech below:—

"Mr. Toastmaster, Members of the State Highway Commission, Guests, and Fellow-Workers of the State Highway Department:—

"The dedication of this service station marks an epoch in the history of the State Highway Department, which is the culmination of our two years' work since my appointment. This dinner tendered me in connection therewith and the wonderful tributes paid me by the speakers, together with this token which you have presented me, prevents me from concentrating on words that fully express my gratification at the wonderful results obtained by our organization in the carrying out of its part of the program to give New Jersey the finest highways in the country.

"Two years ago my first impression of the work before me was to secure cooperation, which could only be obtained through organization, and I find today that I have no complaint whatever to make for a lack of cooperation and what we have is an organization that is only necessary to keep moving to get the results desired. The cooperation has been both on the part of the Commission, who have sustained my judgment, and the employees of the Department, from the heads of the divisions to the lowest paid man, who have worked constantly carrying out my judgment.

"Right here I might quote the words of the Chairman of the Highway Commission, when he writes for the HIGHWAYMAN:—

"The aim of the New Jersey State Highway Commission is to promote the enthusiasm of every officer and employee in behalf of a high standard of public service, for it is the men of the State Highway Department who, by ability, loyalty, initiative, and faithful work, make the service what it is."

"Commenting on the above remarks of the Chairman, we have tried to serve the public, and have not been annoyed by complaints. Some two years ago, complaints were numerous. Today, several letters that reach us are of commendation.

"I accept them on your behalf, as it is you men who are responsible for the results. The Equipment Division, to my mind, is a silent partner of the Maintenance Division. If the roads are maintained in such shape as to bring favorable comments from the motorists, you never hear a word about the part the Equipment Division played in it, although they are a very important factor in the success of the maintenance men, and only through the cooperation of the two divisions is it possible to bring satisfactory results.

"Should we keep the organization intact as we have it today, it will only be a short time before all the highways in the State will be in such a serviceable condition as to satisfy the traveling public. If we fail in organization then all our individual efforts are lost. The pulling for one another is the key-note of success.


"If the cooperation of our organization will continue as it has, it will give us a reputation second to no organization in the country.

"In closing, I wish to thank everyone for this beautiful gift, and long after I have relinquished my position in the Department, I will cherish it as a token from men who supported me in our efforts to succeed, not forgetting the efforts of the Equipment Division."

## An Identification Card for Highwaymen

The country is filled with books on Who's who "this", and Who's who "that" so that it is only right for the HIGHWAYMEN to be properly known when they try to hold up traffic passing over construction jobs, or go on private property for the purpose of survey and staking.

The new Identification



STATE OF NEW JERSEY  
STATE HIGHWAY COMMISSION

I, THOMAS J. WASSER, State Highway Engineer, do hereby certify that

**HARRY C. SHINN**

**CHIEF EDITOR "HIGHWAYMAN"**

is an employee of the New Jersey State Highway Commission and as such is governed by "An act to establish a State Highway Department and to define its powers and duties; and vesting therein all the powers and duties now devolved by law upon the Commissioner of Public Roads, and the existing State Highway Commission and Highway Commission" (Chap. 15, P. L. 1917.)

**1922**

*Charles Fishberg*  
State Highway Engineer.

Card was designed by our Chief, Mr. Wasser, and has been approved for the use of the Highway Commissioners and all the permanent employees of the Highway Department. It will bear the original signature of each employee, and will be carried until the employee leaves the service of the Department. The card must be turned in when the service is at an end.

CHARLES FISHBERG,  
Asst. Ch. Clerk.

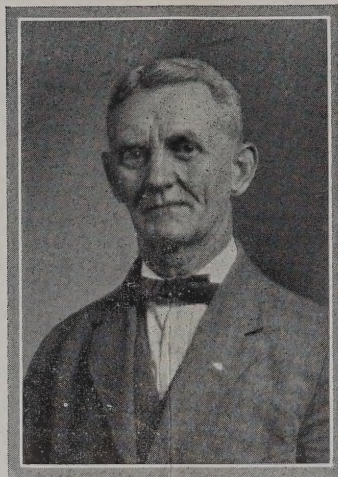


# The Highwayman

THE HIGHWAYMAN,  
Broad St. Bldg.,  
Trenton, N. J.

Dear Sir:—The attached letter is self-explanatory.

To the Laboratory Division and residents of Salem County the accompanying photograph needs no explanation. However, to the other members of the Department



CHARLES M. REEVES  
Inspector

ment and the public at large, I wish to introduce Mr. Charles M. Reeves, perhaps better known as "Cappy".

For any small favors or compliments received, the Laboratory Division is truly thankful, and we hold "Cappy" responsible for this one.

Very truly yours,

/s/ J. G. BRAGG,  
Senior Testing Engineer.

## To Foremen, Equipment Operators, and Maintenance and Construction Men in the Field

Do you realize what was necessary in order that your checks might be delivered to you on the regular pay day period, the first of July, in view of the fact that July 1st was Saturday, a half day, July 2nd was Sunday, and July 4th was a holiday?

This meant that the last daily reports of the period had to be recorded, pay rolls prepared, time checked, and checks written and signed for 996 men in two and a half days of straight working time, which was a physical impossibility and necessitated the following men working overtime on Saturday afternoon and Sunday morning, and a part of the Fourth, for which time, being salaried men, they received no extra compensation, and which was purely a matter of loyalty to your interests:

Arthur Amission  
Clyde Case  
Joseph Sullivan  
H. C. Shreve  
Earle Leonard

The work was facilitated by the prompt submission of the Daily Reports and Time Books as requested in circular letter sent out the previous week by the Maintenance Division. We would particularly emphasize the importance of getting the Daily Reports and finally your payroll book and signed payroll to this office on the first day succeeding the closing of the pay period.



When approaching a railroad grade crossing, it is well to remember that the time to stop is *before* reaching the middle of the track.

High speed is glorious, but the fellow who wrote that, 'The path of glory leads but to the grave,' said a real mouthful.—*American Motorist*.

## Re: Route 6, Section 10

T. J. Wasser, Esq., State Highway Engineer,  
Trenton, N. J.

Dear Sir:—I feel it my duty to call your attention to the results achieved by the material inspection which you have had made in Salem County.

The work on this road consisted in grading and repairing the gravel surface which would be later used for a sub-grade for a concrete road. It was of course necessary to use local deposits of gravel. Your Inspector, Mr. Reeves, located several pits and sent samples to the Laboratory for tests. The results of these tests were forwarded to me before the plans were approved and the pits were listed both on the key map and on the list of materials as sources of a supply of gravel which had the approval of the Laboratory.

In my opinion, this material reduced the bids on this road. We received bids from twenty contractors and practically all of them examined these pits before making their bids. It enabled the Contractors, when making their bids, to examine the pits and know definitely upon what length of haul they were bidding and also to obtain prices from the owners.

This work produced such results that I intend to show similar information on all plans for future work.

Very truly yours,

(Signed) H. B. KEASBY,  
County Engineer, Salem County.



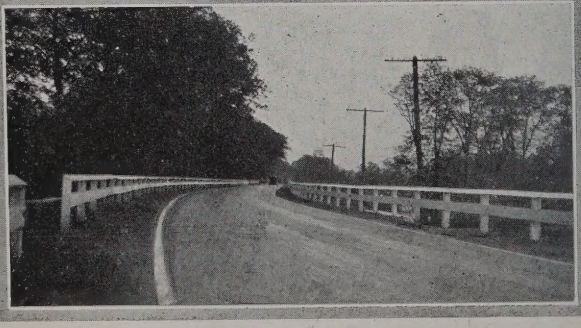
## Received by Mr. T. J. Wasser

By Radio,  
Saturday, July 8, 1922  
Broadcasting Station, FRB

A rival of another Highwayman was announced at 11 P. M. May years pass rapidly in order that he may take his rank among the other Highwaymen of the Department. Congratulations, Fred!



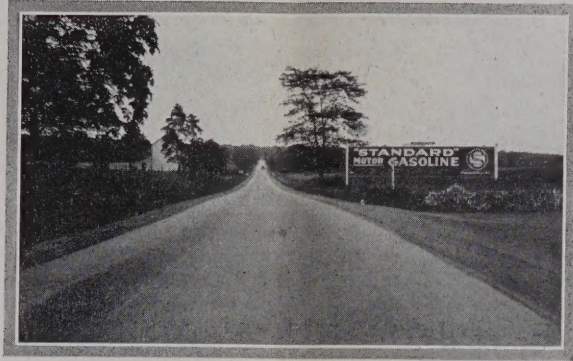
BEFORE—1916



AFTER—1922

Route No. 12, Sec. 1, near Passaic River Bridge. Conditions shown in picture taken in 1916 represent those still existing in 1921, "Before" improvements were started. Picture on right shows same point "After" improvements were made.





Route 13; Looking North, Just North of Kingston

## Along Your Highways

*Under this heading is presented each month a description of the conditions along one or more of the main roads of the state. If you drive a car, you will be interested in following this series.*

### Route No. 13

Starting from Trenton on the continuation of Route 13, known as Brunswick Avenue in the City of Trenton, a decided contrast of this section of Brunswick Avenue is to be noted over conditions of a couple of years ago. The pole banding which starts from the Battle Monument in Trenton directs traffic to the outskirts of the city and to the beginning of the highway route, the brown color indicating that the route is taking a northeasterly direction. Just after crossing the City Line on the right the twenty ton auto truck scales built by the Department, to enable the Department of Motor Vehicles to regulate the loads of vehicles within the law and to penalize those who are violating the law, will be observed. The weighing up of trucks at different points throughout the State by the Motor Vehicle Department has several beneficial effects. The one in which the Department is most interested is that of preventing excessive loads from breaking up the roads which were not designed to carry them. The Department also benefits by the increased receipts of the Motor Vehicle Department on account of the increase in license fees necessary to conform with the law and the fines imposed for violating the law.

The condition of Route No. 13 from Trenton City Line to and through Lawrenceville is fairly good. Lawrenceville, one of the interesting points along this route, is noted particularly for the Lawrenceville Preparatory School. The Route from Lawrenceville to Princeton has not withstood the heavy traffic to which it has been subjected in the last year, it being very difficult to maintain any macadam pavement under such heavy traffic, and although this road was in good condition last fall, a combination of the heavy traffic and the poor drainage conditions caused partly by the trolley road which parallels and is on the right of way of this route causes the above conditions.

Maintenance forces are engaged in resurfacing this section and are working southerly from Princeton. The portion of about one mile and a half which has been scarified and rerolled with addition of new stone, offers a very good riding surface, with a later addition of bitumen surface coat, it will take care of traffic conditions until something better can be done. The users of this portion of Route No. 13 (also the Lincoln Highway) certainly wish Alex. Muir and his forces success in speedily putting the roadway in good condition.

### Princeton—Beautiful Residential Town

Tourists will find Princeton worth a stop and a sight-seeing trip through the town and Princeton University. Princeton is one of New Jersey's prettiest residential towns, in addition to having a nationally great university. The paving through Nassau Street is excellent and the width of this thoroughfare offers ample opportunity for parking

space on the side and the main traffic through the town. The construction of that section of Route No. 13 between the northerly boundary of Princeton and Kingston, completes the hard surfaced paving over Route 13 (also the Lincoln Highway) from Princeton to New Brunswick, with a short exception at Kingston just before the sharp right turn at the Kingston Mill, the hard surfaced pavement stops and does not begin again until the several bridges clustered in the valley, spanning the outlet of Princeton Lake and the Raritan Canal and the Railroad Crossing of the Rocky Hill Branch of the Pennsylvania Railroad have been crossed. At the top of the hill in the Town of Kingston, the hard surfaced pavement again begins and continues to New Brunswick.

A satisfactory solution of the road and bridge problem encountered in this section will necessitate the expenditure of a large sum of money. Several schemes have been tentatively considered, including the construction of a viaduct from the top of the hill in Kingston to the top of the hill, south of the Kingston Mill. Such a structure would necessarily be very costly.

Without considering this as necessarily the proper solution for the problem, it is nevertheless evident that any permanent solution will entail the expenditure of such a large sum of money that could for the present be expended to construct considerable road mileage. Conditions at this point are, therefore, being maintained in a passable condition until funds are available for carrying out a program of this magnitude.

### Difficult Engineering Problems

The construction of Route 13 with concrete pavement between Kingston and New Brunswick offered many engineering problems. At the top of the long grade about a mile and a half north of Kingston a straight course was laid out over new right of way to avoid several bad turns on the old road and very bad drainage conditions, also shortening by several hundred feet the length of the road. In one place for eighteen hundred feet at a point about three miles north of Kingston a very heavy sticky white clay was encountered, saturated with water, which had caused an impossible maintenance condition for years, previous to its reconstruction. This clay was removed to a depth of three feet below the road and a net-work of tile pipe layed in the bottom of the excavation, leading off to a small stream to drain away the water. The excavated portion was refilled with large rock taken from other parts of the work, sand and crushed stone, in order to offer a porous material through which the water would rapidly escape to the drainage system below, in order to keep from "freezing up and blowing up", the concrete pavement which was built thereon. Three or four miles further on between Franklin Park and New Brunswick for a distance of about two miles north of Franklin Park,



# The Highwayman



*On Route No. 13 about a mile and a half north of Kingston looking to the south (photo taken from top of hill which marks beginning of the new alignment.)*

the road is practically level. The highway at this point is on a divide of land, the ground sloping off in either direction at right angles to the road. A very poor drainage condition had existed through this two mile section for years as there was not sufficient flow to carry off the water from the surface or sub-soil. The solution of this drainage problem consists of a storm sewer starting in Franklin Park and running to a stream about two miles north, increasing in size sufficient to take care of surface and sub-soil drainage conditions. The parallel lines of sub-soil or french drains empty into the storm sewer at frequent intervals, resulting in almost continuous flow of water entering the storm sewer. This drainage system has proven effective as no cracks have appeared in this section of the highway that can be ascribed to lack of adequate drainage. Another indication of the success of the drainage system is the fact that the residents of this farm community have stated that the level of their wells was lowered considerably after the drainage system was constructed. The storm water or surface drainage had to be taken care of by "Forced Grade U Gutters". By forced grade is meant that the gutter runs on grades alternately up and down to catch basins at frequent intervals, in order to carry the water to the catch basin at which point it is emptied into the storm sewer. Under average conditions a road offers opportunity to be graded longitudinally in order to carry the water to some lower point where it runs off on the adjoining land or through a stream.

## *They Made Money "Pulling Out" Autos*

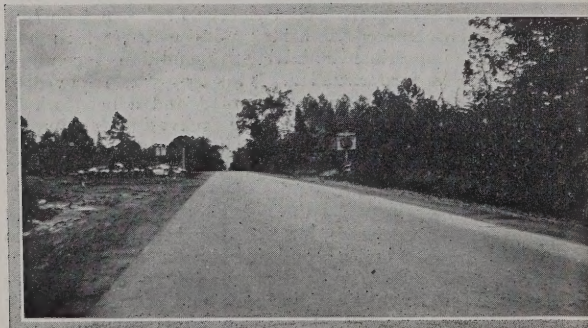
To drive over this route having been familiar with conditions of a few years ago, the contrast is strikingly apparent. It is known to be a fact that the residents along certain sections of this portion of the Lincoln Highway made considerable money by keeping their teams harnessed in readiness to pull out automobiles which became mired after sinking through the macadam road into the clay sub-soil in the spring. In some cases the macadam had been built to a depth of over two feet, by incessant dumping of stone at these points in order to try to overcome the instability of the road. The scenery offered along this road is of the very finest. A few pictures illus-

trating this are shown herewith. It is a very noticeable fact that on this route in particular and all roads in general, a high class road improvement, giving maximum possible utilization and a neat clean appearance has a very decided effect upon property owners, inducing them to paint their buildings, clean up their yards, and improve the condition and appearance of their farms and buildings to conform with the type of improvement made along the roadway. The increased value of the property due to all these conditions is apparent to any observer who has been familiar with conditions "Before and After."

Entering New Brunswick, ones reception in the way of paving is not of the best. The State Highway Act of 1917 provides that in cities over sixteen thousand population the State Highway Department may enter into an agreement with the governing body of the city for the improvement of the streets connecting the highway route or routes between the city lines. The City of New Brunswick and the State Highway Commission are now in the preliminary steps looking to the improvement of the streets which carry the traffic from the State Highway Routes.

## *The Reason For the "Reimbursement Plan."*

Since the State Highway System has been established by the law of 1917, the State Highway Commission has pursued a policy of building from the funds received through the one mill tax, amounting to approximately \$3,500,000 per year, those portions of the State Highway System which were subjected to the heaviest traffic and, the paving, drainage and traffic conditions most difficult to maintain in a safe and smooth condition for the traveling public. The needs of construction were so much greater than the funds available, that the provision of the highway act providing that the work may be done through the reimbursement plan by the various counties was resorted to, in order to span some of the worst gaps of the system with passable roads and safe bridges. The 1917 act providing that funds raised at the rate of one mill on the dollar of assessed valuation for a period of five years ended in 1922. These funds have been used up on road and bridge construction and the funds of 1923 are allotted to bridge work. The funds of 1924, 1925 and 1926 have



*Route No. 13—North of Kingston looking south. Right, looking north along the new road.*





*Route No. 13 looking at the highway from a side road. The white spot in center is the concrete highway*

been obligated through the county reimbursement act, so that the Highway Commission finds itself in a position where it cannot undertake the reconstruction of portions of the highway system without the approval and instigation of the governing bodies of the various counties and municipalities. This condition must continue until proper legislation is enacted to enable the Department to be financed in such a way that such conditions can be overcome.

A law was passed by the Legislature in the Spring of 1922, providing for a referendum by the people of New Jersey at the fall election, upon an issue of bonds as needed, not to exceed eight million dollars per year, or a total amount of \$40,000,000, to provide for the completion of the paving of the highway system and rebuilding safe and adequate bridges where necessary.

#### *Improvements Being Made On Route No. 1*

The extension of this route has been marked by brown pole bands from Chambers Street in Trenton to the City Line, indicating that it takes a general north-easterly direction. Route 1 parallels Route 13 in a general way. The present city pavement over Greenwood Avenue from Chambers Street is in very good condition. Upon reaching the city line, which is the beginning of Route No. 1, the pavement is in rough condition. An agreement with Mercer County has been reached, providing for the reconstruction of this section between the city line of Trenton and Nottingham Way at the Fair Grounds and contract has been awarded to Rees and Taylor.

The paving from this point onward through Mercerville to Hamilton Square is in very good condition and the section through the town of Hamilton Square is fast approaching completion by forces of Contractor Daniel Klockner, Junior. The Trenton and Mercer County Traction Company are raising their tracks to conform with the grade of the paving, preliminary to the paving between the tracks.

After these small sections are completed a continuous good pavement from the Trenton City Line to Hightstown will exist with the exception of a very short stretch through Robbinsville where lack of funds for the elimi-

nation of a very bad grade crossing prevents the completion of this short stretch of pavement.

The concrete pavement through Hightstown through co-operation of the borough was built from curb to curb which adds greatly to the appearance of the town and to the utilization of the highway, providing parking space along the curbs with fair width for through traffic.

#### *Co-operation By Towns and Cities Makes For*

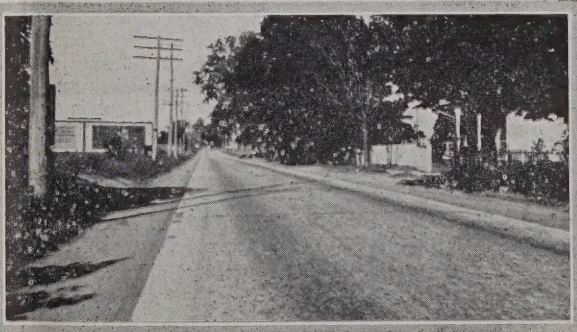
This progressive spirit on the part of towns and cities, in taking care of local traffic conditions as well as the through traffic is necessary, in order to adequately take care of the heavy, growing traffic needs. Leaving New Brunswick over Albany Street after crossing over the Raritan River the Borough of Highland Park is reached. The paving through Highland Park is somewhat rough and will be repaved under the reimbursement act this year.

The section of the highway from the northerly boundary of the Borough of Highland Park to Metuchen has been very difficult to maintain under the enormous truck traffic to which this Route (Also the Lincoln Highway) is subjected, with a bituminous concrete pavement on a macadam base. The very heavy maintenance cost on this road made it mandatory that reconstruction be undertaken at once, providing for a hard surfaced pavement with adequate drainage facilities. This will be done under the reimbursement act this year.

In Metuchen some will remember the left and right turns and steep grade over the four track main line of the Pennsylvania Railroad on the southerly approach to this town and the very bad paving conditions existing from this point through Metuchen. This dangerous overhead crossing has been eliminated.

The concrete pavement continues from Metuchen to Menlo Park, at which point the new alignment begins paralleling the four track main line of the Pennsylvania Railroad to Rahway. The old road made a sharp turn at Menlo Park and went underneath the four track main line of the railroad, a narrow dangerous one-way culvert making a very sharp turn a few hundred feet beyond the culvert and then, paralleling the railroad for a distance

[Continued on Page 11]



*Route No. 1 West of Hightstown looking easterly (on right looking westerly)*



## Contract News

Prepared to July 7, 1922

Feb. 6—Route 6, Section 5, Shirley-Oldman's Creek, Reinforced Concrete Paving job, 6.812 miles, 20 feet wide with gravel shoulders, was awarded to the Benjamin Foster Company, Philadelphia, Pennsylvania, on their low bid of \$254,021.53.

Feb. 15—Route 6, Section 6—Old Man's Creek-Mullica Hill, Reinforced Concrete Paving job, 5.028 miles, 20-30 feet wide with gravel shoulders, was awarded to the firm of M. Staub, Swedesboro, New Jersey, on his low bid of \$203,660.48.

Feb. 14—Route 2, Section 3, South Broad St., Storm Drain job was awarded to A. G. Thompson, of Trenton, New Jersey, on his low bid of \$17,665.06.

March 6—Route 6, Section 10, Quinton to Marlboro, Grading and Graveling job, 5.994 miles, 20 feet wide, with earth shoulders, was awarded to the Masterson Construction Corporation, New York City, on their low bid of \$79,793.17.

March 6—Route 6, Section 11, Salem to Quinton, Reinforced Concrete paving job, 2.648 miles, 20 feet wide with gravel shoulders was awarded to Joseph E. Burke, of Plainfield, New Jersey, on his low bid of \$111,833.79.

Feb. 27—Route 10, Section 1-B, Arcadian Way to Anderson Ave. in Fort Lee, Reinforced concrete paving job, 0.48 miles, 20 and 30 feet wide with earth shoulders, was awarded to the firm of John J. McGarry, Edgewater, New Jersey, on his low bid of \$104,362.61.

Feb. 21—Route 14, Section 5, Cape May Court House to Swainton, Reinforced Concrete paving job, 2.987 miles, 20 feet wide with gravel shoulders, was awarded to the firm of Sutton and Corson, Ocean City, New Jersey, on their low bid of \$118,776.16.

March 8—Route 4, Section 9, Smithville-Mullica River, Warrenite Bitulithic job, on concrete base, 3.748 miles, thirty feet wide, with gravel shoulders was awarded to C. H. Earle of Hackensack, New Jersey, on his low bid of \$374,533.77.

March 8—Route 4, Section 6, Eatontown-West Long Branch, Sheet Asphalt job on Concrete Base, 2.69 miles, 20 feet wide with earth shoulders was awarded to the Utility Construction Company of New Brunswick, New Jersey, on their low bid of \$149,679.74.

April 14—Route 5, Section 5, Madison Ave., Madison Township and Borough of Madison, Warrenite Bitulithic on Concrete base, 2.032 miles, 20 feet wide with earth shoulders, was awarded to the Northern Construction Company, of Newark, New Jersey, on their low bid of \$117,844.37.

April 13—Route 15, Sections 2 and 3, Bridgeton-Millville, Warrenite Bitulithic on Concrete base, 8 miles, 20 feet wide with gravel shoulders was awarded to the Tri-State Construction Company of Bridgeton, New Jersey, on their low bid of \$455,500.12.

April 14—Route 4, Section 14, Laurelton-Lakewood, 3.875 miles, Reinforced Concrete Paving job, 20 feet wide with gravel shoulders was awarded to C. H. Earle of Hackensack, New Jersey, on his low bid of \$144,705.68.

April 28—Route 4, Section 13, Richmond Ave., Point Pleasant Beach, Reinforced Concrete paving job, 0.848 miles, 20 feet wide with earth shoulders was awarded to C. H. Earle of Hackensack, New Jersey, on his low bid of \$35,471.76.

May 16—Route 4, Section 15, Lakewood (County section) 2.556 miles Reinforced Concrete Paving job, twenty-eight and thirty feet wide, was awarded to the Public Service Production Company of Newark, on their low bid of \$75,748.82.

May 16—Route 4, Section 15, Lakewood (Township Section) 2.556 miles, Reinforced concrete paving job, 36 and 50 feet wide was awarded to C. H. Earle of Hackensack, New Jersey, on his low bid of \$105,741.10.

May 23—Route 6, Section 12, East Commerce Street, Bridgeton, 1.314 miles long. Sheet Asphalt paving job on Concrete Base, 20 and 32 feet wide, was awarded to E. R. Mixner Co., on their low bid of \$80,422.01.

May 26—Route 9, Section 8, North Branch-Somerville, 3.837 miles, Reinforced Concrete paving job, 20 feet wide with earth shoulder was awarded to Ralph Sangiovanni, on his low bid of \$159,077.59.

May 26—Route 16, Section 3, Bedminster-Pluckamin, 2.415 miles Reinforced Concrete paving job, 20 feet wide with earth shoulders was awarded to Ralph Sangiovanni, on his low bid of \$135,648.39.

May 26—Route 4, Section 16, Maine St., Toms River, 1.096 miles long, Reinforced Concrete paving job, 20, 30, 36, 38 and 56 feet wide with gravel shoulders was awarded to the Public Service Production Company of Newark, on their low bid of \$62,864.59.

June 2—Route 5, Section 9, Barkers Corner-Hacketts-town, 2.99 miles Reinforced Concrete paving job, 20 and 48 feet wide with earth shoulders was awarded to Frank J. Groman, of Bethlehem, Pennsylvania, on his low bid of \$230,274.37.

June 6—Route 2, Section 3-A, Whitehorse-Crosswicks Creek, 0.389 miles, Reinforced Concrete paving job, 30 and 40 feet wide was awarded to Daniel Klockner, of Trenton, New Jersey, on his low bid of \$37,472.82.

Jan. 10—Route 6, Section 8, Pearl St., Bridgeton, Reinforced Concrete paving job, 0.455 miles, 20 and 30 feet wide with gravel shoulders was awarded to the Tri-State Construction Company, Bridgeton, New Jersey, on their low bid of \$76,302.36.

April 5—Route 4, Section 10, Shadow Lawn-Roseld Avenue, Sheet Asphalt Paving job on Concrete Base, 2.41 miles, 20 and 36 feet wide with earth shoulders, was awarded to Newark Paving Company, of Newark, New Jersey, on their low bid of \$104,969.51.

April 4—Route 2, Section 3, South Broad Street, Sheet Asphalt job, on Concrete Base, 0.648 miles, 48.5 feet wide, was awarded to J. J. Barrett, Trenton, New Jersey, on his low bid of \$69,433.77.

March 1—Route 11, Section 1, Main Street, Passaic, Sheet Asphalt job, on Concrete Base, 0.257 miles, 22 feet, 2 inches wide, was awarded to Union Building Construction Company, Passaic, New Jersey, on their low bid of \$15,160.15.

April 5—Route 4, Section 12, Sea Girt Avenue, Reinforced Concrete Paving job, 0.162 miles, 20 feet wide with earth shoulders was awarded to T. H. Riddle, New Brunswick, New Jersey, on his low bid of \$8,569.23.

April 4—Route 9, Section 6, Somerville-Bound Brook, Reinforced Concrete Paving job, 2.491 miles, 20 feet wide, earth shoulders was awarded to Salmon Brothers, Netcong, New Jersey, on their low bid of \$131,710.10.

March 31—Route 4, Section 5-A, Storm Drain in Red Bank, was awarded to Chas. J. Romano, Montclair, New Jersey, on his low bid of \$15,314.85.

April 10—Route 6, Section 9, Salem-Collier's Run, Reinforced Concrete Paving job, 4.752 miles, 20 feet wide with gravel shoulders was awarded to Sampson & Reuter, Elizabeth, New Jersey, on their low bid of \$196,975.08.

April 18—Route 9, Section 5, Union Avenue, Bound Brook, Sheet Asphalt on Concrete Base, 1.501 miles, 20 feet wide with earth shoulders was awarded to the Utility Construction Company of New Brunswick, New Jersey, on their low bid of \$93,090.31.

April 10—Route 3, Section 8, Camden-Clements Bridge Road, Reinforced Concrete Paving job, 3.82 miles, 36 and 40 feet with earth shoulders was awarded to W. Penn Corson, Camden, N. J., on his low bid of \$269,644.85.

April 10, Route 3, Section 9, Clements Bridge Road-Kirkwood, Reinforced Concrete Paving job, 3.756 miles, 29 feet wide with earth shoulders was awarded to John M. Kelley Construction Co., Camden, N. J., on their low bid of \$200,592.95.

April 10—Route 3, Section 10, Kirkwood-Berlin, Reinforced Concrete Paving job, 5.576 miles, 29 feet wide with earth shoulders was awarded to John M. Kelley Construction Co., Camden, N. J., on their low bid of \$297,993.89.

May 29—Route 9, Section B, West Front Street, Plain-



field, Sheet Asphalt paving job on Concrete Base, 1.929 miles, 40 and 41 feet wide, was awarded to the Union Paving Company, of Newark, New Jersey, on their low bid of \$219,316.20.

June 20—Route 1, Section 6, Trenton City Line-Nottingham Way, reinforced concrete paving job, 0.928 miles, 39 feet, six inches wide, was awarded to Rees and Taylor, of Trenton, New Jersey, on their low bid of \$95,347.47.

June 21—Route 4, Section 5-A, Maple Avenue, Red Bank, Sheet Asphalt paving job on Concrete Base, 1.308 miles, 40, 33 and 22 feet wide with earth shoulder was awarded to J. J. Barrett, of Trenton, New Jersey, on his low bid of \$93,429.13.

June 21—Route 4, Section 11, Main Street, Avon, New Jersey, Warrenite Bitulithic surface on Concrete Base, 0.663 miles, 43 feet wide with earth shoulders was awarded to the East Jersey Bridge Company, of Perth Amboy, New Jersey, on their low bid of \$54,814.34.

June 21—Route 5, Section 6, Speedwell Avenue, Morristown, Warrenite Bitulithic surface on Concrete Base, 1.426 miles, 23 feet, 3½ inches wide was awarded to J. S. Geiger Sons of Newark, New Jersey, on their low bid of \$144,892.74.

June 21—Route 9, Section 9, Phillipsburg-Still Valley, Reinforced Concrete paving job, 1.68 miles, 20 and 36 feet wide with earth shoulders was awarded to Crilly and Cannon of Phillipsburg, New Jersey, on their low bid of \$110,345.40.

## Along Your Highways

[Continued from Page 9]

of a couple of miles to Iselin, where a sharp up-grade left hand right angle turn and a very dangerous grade crossing existed. The highway then continued on the westerly side of the railroad at some distance away

through the town of Colonia, a high class residential section, then coming out at the same point in Rahway where the present improved hard surface straight highway comes out. Upon these sections of the highway from Menlo Park to Rahway constructed in war times with inmate labor a very sticky clay sub-soil condition was met. The need for the road to accommodate abnormal war time truck traffic was so great that construction was pushed very fast and under conditions that would ordinarily have been prohibited. The straightening of the highway and the elimination of dangerous points is noteworthy on this section.

Through Rahway a twenty-nine foot concrete pavement was laid with a center construction joint which has a marked tendency in dividing the traffic and thereby preventing accidents.

The continuation of Route 1 to Elizabeth was constructed of concrete base and warrenite top to a width of twenty-nine feet. The greater width of Route 1 north of Rahway where Route No. 1 and Route No. 4 join, was necessitated by the increasing flow of traffic encountered due to the flowing together of Routes 1 and 13, bringing interstate traffic and Route 4, which carries the heavy shore resort traffic, Route No. 1 continuing through Elizabeth has been greatly improved by the reconstruction of Cherry Street of Belgian block on a concrete base.

The traveler will find the color bands through these municipalities a great aid in finding one's way. The construction of the section of Route 1 between Elizabeth and Newark this year under the reimbursement act will complete, with the exceptions noted, the hard surfaced modern construction pavement from Trenton to Newark.

A supplement to the Edge highway act in 1921 made highway Route No. 1 continue through Elizabeth, Newark and Jersey City to the approach to the ferries and the vehicular tunnel, although that portion through Newark and Jersey City has not yet been taken over for maintenance by the State Highway Department.



In front of Seaview Golf Club, near Atlantic City, (Route 4)

## Warrenite—Bitulithic Pavements Have Stood Up Under Heavy Traffic For 15 Years

The test of the paving is in the riding—and the cost of upkeep.

Upon either of these points we invite your critical investigation.

Some of the oldest paved roads in New Jersey were laid under the Warren patents.

Many of these have been in constant use under heavy traffic for fifteen years. They are still in excellent condition.

*"The Best Road You Can Buy Is the Cheapest in the End."*

**Warren Bros. Company**

District Office 50 Church Street, New York City, N. Y.



# The Highwayman



Benson Street, Glen Ridge, New Jersey, "Tarvia-B" 1919 and 1920

## Are your roads in rags, or well dressed?

"The apparel oft proclaims the man."

And Shakespeare might well have added, "The road oft proclaims the town;" for good roads are the one unfailing sign of a progressive community.

Tarvia Roads are not only good roads—they are also *economical roads*.

Whether used for new construction or for resurfacing worn-out macadam, the moderate cost of Tarvia-macadam means a substantial saving in first cost, while the saving in maintenance expense, compared with other types of permanent construction, is proportionately even greater.

Tarvia roads are dustless and mudless in

all kinds of weather. They are waterproof and so are unaffected by the biting frosts of winter. The melting snow finds them smooth and firm—all ready for the hard summer traffic.

For your every road problem—new construction, repairs and maintenance—there is a grade of Tarvia and a Tarvia treatment that provides an economical and satisfactory solution.

Hundreds of progressive communities in every part of the country use Tarvia for all their road work. They have found that Tarvia roads "make the going easy" for both the travelling public and the taxpayer.

# Tarvia

*For Road Construction  
Repair and Maintenance*

Tarvia is a coal tar preparation made in a number of grades to meet varying road conditions. It is the most popular road material in America and has solved the problem of low cost, traffic-proof roads and pavements for hundreds of towns throughout the country.

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# Dragon

PORTLAND CEMENT

The Cement you get is **good**.

It is also **uniform**.

Your order is filled **promptly**.

In a word—you get the kind of service you have a right to expect.

*"For Cement you can depend on—use Dragon"*

**Lawrence Cement Co.**

PHILADELPHIA

302 Broadway, NEW YORK

## It's the Last Fraction of Control

that often saves the motorist. And with Concrete pavement, that fraction is available for you.

Good brakes, good tires, good driving—all are necessary, but above all there must be a skid-proof pavement.

Concrete streets are skid-proof. Tires can grip the firm, gritty surface even in wet weather. Concrete is clean, permanent, hole-proof—a pavement after the motorist's and home owner's own heart.

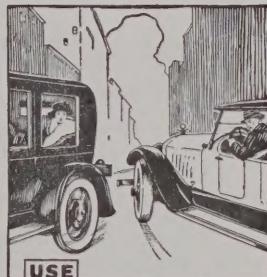
*Our Booklet R-4 tells other interesting things  
about Concrete Streets. Write for your copy.*

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*A National Organization to Improve and Extend the Uses of Concrete*

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**CONCRETE**  
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## GLUTRIN

### Four Reasons Why All Gravel Roads Should Be Treated With Glutrin

First: **Glutrinized** gravel roads are hard all the year round.

Second: **Glutrinized** roads shed water—and for that reason they do not rut up during the winter and Spring.

Third: Glutrin is the best binder yet discovered for gravel stone, sand-clay, or slag or earth roads.

And finally: Glutrin is not only the best binder, but by far the most economical.

#### *What Local Authorities Think of Glutrin Road Binder:*

*Taken from the Daily Pioneer of Bridgeton, N. J., Tuesday, February 14, 1922*

##### "SHOWS VALUE"

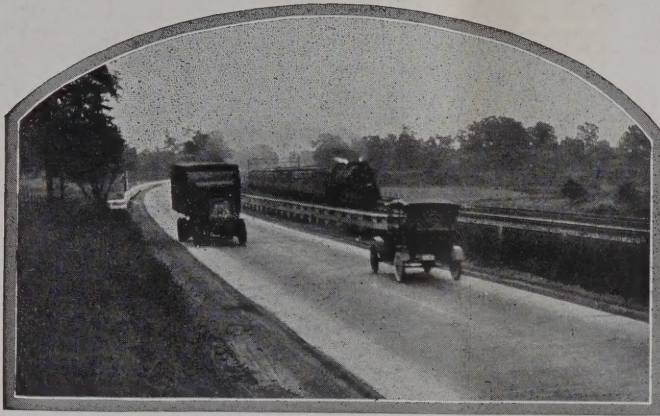
"Last fall the state highway department caused west Commerce street to be flushed with glutrin, an oil-like preparation which has for its object the laying of the dust and preventing the gravel on the roads from being cut up with the traffic. The glutrin application also has had the effect of giving the street a surface which turned much of the water, and the results show a very much improved condition this winter. While most of the gravel streets are soft with mud, west Commerce street is comparatively firm and free from mud, and much smoother in consequence. The experiment would seem to indicate that the glutrin application greatly improves dirt roads."

Glutrin has been manufactured by us in our own plants for over 15 years. We have our own tank car line in which to deliver the product. The material used in New Jersey was applied by Mr. M. R. Young, Trenton, N. J., with pressure distributors especially built to handle this product.

Send us your name, and let us put you next to **Glutrin!**

**Robeson Process Company**  
Fifth Avenue Building, 200 Fifth Avenue, New York





(Courtesy Portland Cement Association)

## When Vulcan Made 'em, They Lasted Forever

Vulcan was the blacksmith of the Gods on high Olympus.

The things he forged in his mighty smithy lasted forever.

Neither time nor tempest, age nor rust, could

destroy their everlastingness!

In that, they were similar to roads built of "Vulcanite"—the cement that is made in our giant plant at Warren Co., Pa., with its capacity of 2,000,000 tons a year.

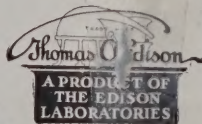
*"Let's get together and talk Cement"*

### VULCANITE PORTLAND CEMENT CO.

PHILADELPHIA

BOSTON

NEW YORK



## "EDISON"

The Word that means "Cement Satisfaction"

Why not put your cement troubles up to Edison?

Why fret and worry and lose money on slow deliveries, when we can ship your order the same day as received?

Do you realize that Edison Cement is produced right here in New Jersey; and that we can ship 150 carloads a day?

*"Edison service Cement when you want it!"*

### EDISON PORTLAND CEMENT CO.

NEW YORK

BOSTON

PHILADELPHIA

PLANT: NEW VILLAGE, N. J.



# ALONG THE ROAD



*A spot like this is worth travelling many miles to see. How inviting those woods look for a basket-supper. Why not plan that little trip for next Sunday? (Route No. 7, Near Kinkora)*

## ONE WAY TRAFFIC

*There is only one road to the town of "Success,"  
The name of the road is "Work".  
It has room for only honest guests,  
Traffic's blocked to those who shirk.*

*The road is open all hours of today,  
It heeds neither time nor date,  
And now is the time to start on your way,  
For tomorrow will be too late.*

*Nearly all of the way is an uphill road;  
It will seem like a tough old fight,  
But once on your way just bear up your load  
And keep going with all your might.*

*You will pass through many towns each day,  
Such as Failure, Gloom and Despair;  
At each of these stations just keep on your way,  
For "Work" does not tarry there.*

*Once you have entered the town of "Success",  
Tho' your load may have been hard to bear,  
Once inside you will find both comfort and rest,  
Just be thankful you started for there.*

—Dale Newell Carty, in *Forbes Magazine*.

## Our Tom

*Made President of American Road Builders Association*

At the annual meeting of the American Road Builders Association, recently held in New York City, T. J. Wasser, State Highway Engineer of New Jersey, was elected President of the Association.

Needless to say, the entire Highway Department congratulates "T. J." on this new recognition of his abilities, and wishes him all success in his added duties.

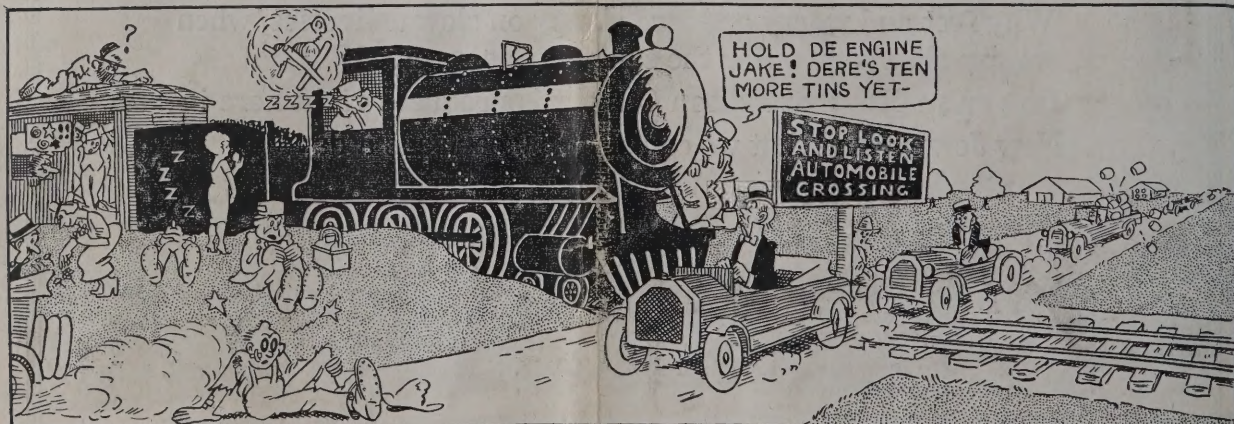


## By-Roads

When you travel, do you stick to the foolish habit of traveling only the main highways?

Of course, if you're on business, and every half-hour counts, that may be necessary. But how often we could take a little time for the "by-roads"—and don't do it.

Next time you go out on a pleasure trip, don't try to see how many miles you can cover, but how charming a spot you can find for a few hours—or a night's camping.



*The Railroad Crossing—As Some Motorists Think It Ought To Be!*